

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number  
WO 2005/047316 A3

(51) International Patent Classification<sup>7</sup>: C07K 14/46, (74) Agents: O'CONNELL, Maura et al.; F.R. Kelly & Co., 4  
7/08, A61K 38/10, 38/17 Mount Charles, Belfast BT7 1NZ (GB).

(21) International Application Number:  
PCT/EP2004/013693

(22) International Filing Date:  
17 November 2004 (17.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0326720.0 17 November 2003 (17.11.2003) GB

(71) Applicant (for all designated States except US): UNIVERSITY OF ULSTER [GB/GB]; Coleraine Campus, Cromore Road, Coleraine, County Londonderry BT52 1SA (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ABDEL-WAHAB, Yassar, Hassan, Atef [—/GB]; 81 Hopefield Grove, Portrush, County Antrim BT56 8NZ (GB). MARENNAH, Lamlin [—/GB]; 3 Millfield Village, Portstewart, County Londonderry BT55 7PQ (GB). ORR, David, Francis [—/GB]; Riverdale, 40 Mountain Road, Kilkeel, County Down BT34 4BB (GB). McCLEAN, Stephen [—/GB]; 95A Drumadragh, Coleraine, County Londonderry BT52 2PA (GB). FLATT, Peter, Raymond [—/GB]; 18 Ballymacrea Road, Portrush, County Antrim BT56 8NR (GB). SHAW, Chris [—/GB]; 3 Swallow Close, Comber, County Down BT23 5UJ (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
15 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2005/047316 A3

(54) Title: INSULIN RELEASING PEPTIDES

(57) Abstract: The present invention relates to peptides, or fragments thereof, isolated from the skin secretions of amphibians and which act as stimulators of insulin secretion and pancreatic beta cell function. The invention also encompasses peptide having at least 80%, preferably at least 85%, more preferably at least 90%, optionally more than 95%, sequence identity based on the ClustalW alignment method with the respective amino acid sequences of SEQ ID Nos. 1 to 17. Furthermore, the invention also includes peptides selected from the group comprising brevinins, dermaseptins and esculentins for stimulating insulin secretion by activation of physiological stimulus-secretion coupling pathways. These peptides are useful to stimulate insulin secretion and/or moderate blood glucose excursions. These peptides may be used for treatment of type 1 or type 2 diabetes mellitus.